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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/719,973	11/21/2003	Jacob Lahijani	FL0214USNA	3574

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EXAMINER	
VETERE, ROBERT A	
ART UNIT	PAPER NUMBER
1792	

NOTIFICATION DATE	DELIVERY MODE
04/08/2009	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

PTO-Legal.PRC@usa.dupont.com

Office Action Summary	Application No.	Applicant(s)	
	10/719,973	LAHIJANI, JACOB	
	Examiner	Art Unit	
	ROBERT VETERE	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *16 January 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *6,8,9 and 12-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6, 8-9, 12-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Examiner's Comment

A response to a non-final rejection presenting arguments, but not amendments, was received on 1/16/2009.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

1. Claims 6, 12, 14-18 and 19-27 rejected under 35 U.S.C. 103(a) as being unpatentable over Kazumi (JP 02-904593) in light of Buckmaster (US 4,714,756, hereinafter "Buckmaster '756").

Claims 6, 19-23 and 26-27: Kazumi teaches a method of rotolining the interior of a hollow article comprising:

adding a composition consisting essentially of tetrafluoroethylene/perfluoro(alkyl vinyl ether) copolymer ("PFA") (¶ 0016) and non-bubble promoting (¶ 0007) metal powder (¶¶ 0016-0017) to the interior of said article;

rotating said article to distribute the composition over said interior surface (¶ 0015);

heating said article to melt the copolymer particles and then cooling said article (¶ 0020).

What Kazumi does not teach is that the PFA is fluorine treatment stabilized. Buckmaster '756 teaches a method of preparing melt-processible tetrafluoroethylene perfluoro (alkyl vinyl ether) compolymer (abst.) to be used in rotomolding applications to make linings (Col. 1: 12-15). Buckmaster '756 further teaches that this PFA copolymer is treated with fluorine to stabilize the copolymer to reducing bubbling of the PFA during heat-processing (2: 33-38). This is desirable because stabilized PFA copolymers are easier to handle in conventional melt-fabrication processes (1:34-40) and because it reduces bubbling (2:33-38). Thus, it would have been obvious to one of ordinary skill in the art at the time

the invention was made to have used the fluorine stabilized PFA of Buckmaster '756 in the method of Kazumi to further reduce bubbling and also to provide a PFA which is easier to handle in the rotolining process of Kazumi.

Kazumi also discloses that the metal powder constitutes 0.1 to 30 wt% of said composition. With respect to applicant's limitation of 0.3 to 1.2 wt%, in the case where the claimed ranges "overlap or lie inside ranges disclosed by the prior art" a prima facie case of obviousness exists. *In re Wertheim*, 191 USPQ 90 (CCPA 1976). Furthermore, Kazumi teaches that the exact percentage used can affect the metal powders usefulness in preventing bubbling and it has been held that "where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation." *In re Aller*, 105 USPQ 233, 235 (CCPA 1955). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected and/or optimized the wt% of metal powder used, as taught by Kazumi, in order to have increased the metal powder's usefulness in preventing bubbling of the PFA.

Kazumi and Buckmaster '756 fail to explicitly teach that the stabilized PFA with metal powder promotes adhesion and that said adhesion is characterized by a peel strength of at least about 25 lb/in. However, while these references do not explicitly teach this limitation, the types of additives disclosed by Kazumi are the same as the additives used by applicant and are used in the same proportion as recommended by applicant (see ¶¶ 0016, 0018 and pp. 4-5 of Applicant's specification). Furthermore, Kazumi does explicitly disclose the desire to create a lining that adheres to the inner surface of target to be coated (see ¶¶ 0003 and 0005).

Claims 12 and 14: Kazumi also teaches that the metal powder is zinc and/or contains copper (¶ 0016).

Claims 15-16: Kazumi also teaches that the metal powder is, for example, zinc or a fine powder containing copper (see ¶ 0016). It does not teach that the additive is a combination of metals. However, "it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." *In Re*

Kerkhoven, 205 USPQ 1069, 1072 (CCPA 1980). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a combination of metals (including brass, which is a combination of copper and zinc) as the additive powder in Kazumi.

Claims 17-18: Buckmaster '756 also teaches that the stabilized PFA has less than 80 unstable end groups per 10^6 carbon atoms in the polymer and that the unstable end groups are, for example, –COOH, $-CH_2OH$, and $–CF=CF_2$ (4:21-45).

Claims 24-25: Kazumi teaches all the limitations of claims 24 and 25 in light of Buckmaster '756, as discussed above, but does not teach that the copolymer used is tetrafluoroethylene/perfluoro(methyl vinyl ether)/perfluoro(propyl vinyl ether) ("TFE/PMVE/PPVE") rather than PFA. Buckmaster '756, on the other hand teaches that perfluoro(methyl vinyl ether) and perfluoro(propyl vinyl ether) are known copolymers with tetrafluroroethylene that can be used in melt-processible copolymer compositions (2:49-53). Futhermore, the selection of a known material based on its suitability for its intended use supported a prima facie obviousness determination in *Sinclair & Carroll Co. v. Interchemical Corp.*, 65 USPQ 297 (1945). Thus, it would have been obvious to one of ordinary skill in the art to have used TFE/PMVE/PPVE in place of PFA in the method of Kazumi and Buckmaster '756 with the predictable expectation of success because PMVE/PPVE are recognized copolymers of TFE known to be suitable for this application.

2. Claims 8-9, 13, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kazumi in light of Buckmaster '756 and further in light of Saito et al. (US 5,397,831).

Claims 8-9 and 28-30: Kazumi teaches all the limitations of claims 6 in light of Buckmaster '756, as discussed above. What these references do not explicitly teach is the thickness of the overcoat. Saito, however, teaches a method of rotolining (Col. 2, lines 64-68) an article with PFA (2:64-68) creating a layer which is free of bubbles (2:64-68). It also teaches that it is common to use rotolining to generate a thick film of 5mm (1:58-68). Given this fact and the fact that the thickness of the undercoat in Kazumi was 2 mm, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have increased the thickness of the overcoat in Kazumi to a value as high as 3 mm with a reasonable

expectation of success because layers as thick as 5 mm are common in the art of rotolining with bubble free PFA, as taught by Saito.

Claim 13: Kazumi teaches all the limitations of claim 6 in light of Buckmaster '756, as discussed above. What it does not teach is that the metal powder is tin. Saito, however, teaches that the use of tin as a metal additive is well known in the art of rotolining bubble-free PFA (2:43-56). Furthermore, the selection of a known material based on its suitability for its intended use is *prima facie* obvious. *Sinclair & Carroll Co. v. Interchemical Corp.*, 65 USPQ 297 (1945). Thus, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a metal powder containing tin in the process of Kazumi because it is recognized as a metal powder which will prevent bubbling of PFA during a rotolining process, as taught by Saito.

Response to Arguments

3. Applicant's arguments filed 1/16/2009 have been fully considered but they are not persuasive.

Applicant first argues that Applicant's claimed "non-bubble promoting" differs from Kazumi's bubble suppressing in the context of this invention. This is not persuasive. While it is true, as applicant points out, that promoting and suppressing have different meanings, non-bubble promoting and bubble suppressing are not materially different terms in the context of this case. If applicant were claim bubble promoting as a limitation, then this argument would be persuasive. However, applicant is relying on defining a single word out of the context of an entire clause and this argument completely ignores that the limitation promoting is modified in the negative by "non-bubble."

Applicant next argues that there is no motivation to combine Kazumi and Buckmaster because both patents perform the same function of reducing bubble formation. This is unpersuasive. A rationale to support a conclusion that a claim would have been obvious is that all the claimed elements were known in the prior art and one skilled in the art could have combined the elements as claimed by known methods with no change in their respective functions, and the combination would have yielded nothing more than predictable results to one of ordinary skill in the art. *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395 (2007); *Sakraida v. AG Pro, Inc.*, 425 U.S. 273, 282, 189 USPQ 449, 453 (1976); *Anderson 's-Black Rock, Inc. v. Pavement Salvage Co.*, 396 U.S. 57, 62-63, 163 USPQ

673, 675 (1969); *Great Atlantic & P. Tea Co. v. Supermarket Equipment Corp.*, 340 U.S. 147, 152, 87 USPQ 303, 306 (1950).

Applicant further argues that combination of Buckmaster and Kazumi is inappropriate because Buckmaster teaches a method where having a low metal contamination is desirable. This is not persuasive. "The test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference.... Rather, the test is what the combined teachings of those references would have suggested to those of ordinary skill in the art." In re Keller, 642 F.2d 413, 425, 208 USPQ 871, 881 (CCPA 1981). In this case, Buckmaster teaches that the PFA copolymer is treated with fluorine to stabilize the copolymer to reducing bubbling of the PFA during heat-processing (2: 33-38) and that this is desirable because stabilized PFA copolymers are easier to handle in conventional melt-fabrication processes (1:34-40) and because it reduces bubbling (2:33-38). Regardless of what is considered metal contamination in the art of fluoropolymers, the teaches of Buckmaster would have motivated one of ordinary skill in the art to incorporate this teaching of Buckmaster into Kazumi because noting in Buckmaster suggests that a less than 2% metal contamination would diminish these particular benefits conferred by fluorination.

Applicant reiterates the argument that using the teaching of Saito for the overcoat of Kazumi would not achieve Kazumi's intent because Saito discloses a composition that contains more than just PFA. This is not persuasive. This is not persuasive because Saito is cited as showing common thicknesses that can be generated with rotolining processes using PFA. The argument that the mixture of Kazumi and Buckmaster would be inappropriate for the end use of Saito is not material.

Applicant also reiterates the argument that it would not have been obvious to one of ordinary skill in the art to incorporate tin from Saito because it does not teach adhesion promotion. This is not persuasive. As stated above, the fact that applicant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In this, case, as applicant admits, Saito teaches the use of tin to prevent bubbling in PFA. This is one of the problems which Kazumi deals with. Thus, it would have been obvious to one of ordinary skill in

the art at the time the invention was made to have incorporated tin, as taught by Saito, into the combined method of Kazumi and Buckmaster.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ROBERT VETERE whose telephone number is (571)270-1864. The examiner can normally be reached on Mon-Fri 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Cleveland can be reached on 571-272-1418. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Robert Vetere/
Examiner, Art Unit 1792

/Michael Cleveland/

Supervisory Patent Examiner, Art Unit 1792